

PROJECT: 23-1032 REST, CUMMINGS CREEK LOW TECH RESTORATION (PHASE 2, 3)

Sponsor: Nez Perce Tribe Program: Salmon State Projects Status: Application Submitted

# **Parties to the Agreement**

PRIMARY SPONSOR

| Address          | Nez Perce Tribe<br>PO Box 365 |          |                  |   |
|------------------|-------------------------------|----------|------------------|---|
| City             | Lapwai                        | State ID | <b>Zip</b> 83540 |   |
| Org Type         | Native American Tribe         | •        |                  |   |
| Vendor #         | SWV0069955-01                 |          |                  |   |
| UBI              |                               |          |                  |   |
| Date Org created |                               |          |                  |   |
| Org Notes        |                               |          |                  | link to Organization profile Org data updated |

**SECONDARY SPONSORS** 

No records to display

**MANAGING AGENCY** 

Recreation and Conservation Office

LEAD ENTITY

Snake River Salmon Rec Bd LE

**QUESTIONS** 

#1: List project partners and their role and contribution to the project.

## **External Systems**

**SPONSOR ASSIGNED INFO** 

**Sponsor-Assigned Project Number** 

**Sponsor-Assigned Regions** 

#### **EXTERNAL SYSTEM REFERENCE**

| Source | Project Number | Submitter   |
|--------|----------------|-------------|
| HWS    | 23-1032        | AFitzgerald |

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# **Project Contacts**

| Contact Name<br>Primary Org                    | Project Role        | Work Phone     | Work Email                   |
|--|---------------------|----------------|------------------------------|
| Kendall Barrameda<br>Rec. and Conserv. Office  | Project Manager     | (360) 764-9086 | Kendall.Barrameda@rco.wa.gov |
| Elizabeth Eastman                              | Project Contact     | (208) 816-8805 | elizabethe@nezperce.org      |
| Kathryn Frenyea                                | Alt Project Contact | (541) 432-2506 | kathrynf@nezperce.org        |
| Ali Fitzgerald<br>Snake River Salmon Rec Bd LE | Lead Entity Contact | (509) 382-4115 | ali@snakeriverboard.org      |
| Arleen Henry<br>Nez Perce Tribe                | Billing             | (208) 621-3833 | arleenh@nezperce.org         |

# **Worksites & Properties**

# Worksite Name

#1 Cummings Creek Low Tech Restoration (Phase 2, 3)

## Restoration Property Name

✓ Wooten Wildlife Area WDFW

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## **Worksite Map & Description**

Worksite #1: Cummings Creek Low Tech Restoration (Phase 2, 3)

**WORKSITE ADDRESS** 

Street Address Tucannon Road

City, State, Zip Pomeroy WA 99347

#### **Worksite Details**

Worksite #1: Cummings Creek Low Tech Restoration (Phase 2, 3)

#### SITE ACCESS DIRECTIONS

From US-12, head south on Tucannon Road, Cummings Creek is located at RM 34.5. The project will be from the mouth of Cummings Creek to 3 miles upstream

#### **TARGETED ESU SPECIES**

Species by ESU Egg Present Juvenile Present Adult Present Population Trend

Steelhead-Snake River, Tucannon River, Threatened Unknown

#### Reference or source used

Snake River Salmon Recovery Plan for SE Washington

#### TARGETED NON-ESU SPECIES

Species by Non-ESU Notes

Rainbow

Bull Trout

#### Questions

#1: Give street address or road name and mile post for this worksite if available.

Approximately MP 21, Tucannon Road, Pomeroy, WA 99347, Columbia County

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## **Project Location**

#### **RELATED PROJECTS**

Projects in PRISM

| PRISM<br>Number | Project Name    | Program<br>Name | Current Status | Relationship<br>Type | Notes |
|-----------------|-----------------|-----------------|----------------|----------------------|-------|
| No related pr   | roject selected |                 |                |                      |       |
| Related Proje   | oot Nataa       |                 |                |                      |       |
| Relateu Prois   | ect Notes       |                 |                |                      |       |
|                 |                 |                 |                |                      |       |

#### Questions

#1: Project location. Describe the geographic location, water bodies, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

Cummings Creek is a tributary to the Tucannon River and flows into the mainstem Tucannon at approximately RM 34.5 in Columbia County, WA. Cummings Creek is located within WRIA 35.The downstream extent of the project will be at the mouth of Cummins Creek (46.3324707, -117.6749339) to an upstream extent of approximately two miles upstream (46.3313451, -117.6533401).

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

Cummings Creek is located within the Tucannon River watershed, a major spawning area (MaSA) for ESA-listed Snake River steelhead (Oncorhynchus mykiss) and is listed as a priority restoration reach in the Snake River Salmon Recovery 3-5 Year Provisional Work Plan (Page 11,16).

#3: Is this project part of a larger overall project?

No

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. Aquatic Districts and Managers

No

#### **Property Details**

Property: Wooten Wildlife Area WDFW (Worksite #1: Cummings Creek Low Tech Restoration (Phase 2, 3))

√ Restoration

| LANDOWNE | R                         | CONTROL & TEN   | URE                 |   |
|----------|---------------------------|-----------------|---------------------|---|
| Name     | Wooten Wildlife Area WDFW | Instrument Type | Landowner Agreement |   |
| Address  |                           | Timing          | Proposed            |   |
| City     |                           | Term Length     | Fixed # of years    |   |
| State    | Zip                       | # Yrs           | 4                   |   |
| Type     | State                     | Expiration Date | 03/14/2026          |   |
|          |                           | Note            |                     | 1 |
|          |                           |                 |                     |   |
|          |                           |                 |                     |   |

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## **Project Proposal**

#### **Project Description**

The Nez Perce Tribe requests funds for a low-tech process based design and restoration project to improve in-stream habitat, floodplain connectivity and riparian function for approximately two miles. Cummings Creek is a direct tributary to the

Tucannon River in Southeast Washington located within the Tucannon River watershed, a major spawning area for ESA listed Snake River steelhead and listed as a priority restoration reach in the Snake River Salmon Recovery 3-5 Year Provisional Work Plan. There will be one worksite location, on Washington Department of Fish and Wildlife property, from the mouth of Cummings Creek to approximately 2.0 miles upstream.

The goal of this project is to promote self-sustaining, natural stream processes that improve and maintain spawning and rearing habitat for Snake River steelhead. Funding will be used for a field-based low-tech process-based restoration design and implementation for installation of up to 140 structures: beaver dam analogs (BDAs) and post assisted log structures (PALS). one mile of new structures and two miles of adaptive structure repair and installation. We will also look for opportunities to direct fell and grip-hoist larger trees into the channel where available. The structures will start to restore natural processes and sediment sorting, overbank flow, floodplain access, and in-stream complexity, with approximately 25 pools created.

#### **Project Questions**

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#1: Problem statement. What are the problems your project seeks to address? Include the source and scale of each problem. Describe the site, reach, and watershed conditions. Describe how those conditions impact salmon populations. Include current and historic factors important to understand the problems.

The Tucannon River is located in southeast Washington where it flows north out of the Blue Mountains into the Snake River. The Tucannon River forms the ancestral boundary between the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Nez Perce Tribe (NPT). In 1996 summer steelhead were listed as threatened under the Endangered Species Act (ESA). Historically, the Tucannon River was converted from an anabranching channel form in a narrow forested valley bottom (Hecht, 1982) to a single thread channel form through timber harvest, and channel straightening to support land use and management activities. During the 1960's, following a number of flooding events which progressively led to a significant loss of property and infrastructure (Johnson 1995), the US Army Corps of Engineers (USACE) supported land managers in straightening and confining large sections of the river, increasing the conveyance capacity (stream power), and confining the river to a single channel. It has been estimated that between 1937 and 1978, the perennial channels sinuosity had been reduced by as much as 50% through channelization and confinement (Hecht, 1982). Once the Tucannon River was straightened, velocities led to further channel incision causing the majority of habitat limiting factors that remain today. Channel incision, confinement, and disconnection

between the channel and floodplain contribute to secondary impairments in the physical

and ecological functioning of rivers including spatial and structural simplification of the

channel and floodplain, lowering of the water table, increased stream velocities,

impairment of riparian forest communities, and a reduction in overall aquatic habitat.

The degradation of physical and ecological processes in the Tucannon River caused three very common problems for salmonids associated with confined, incised channels: (1) diminished velocity refuge, (2) minimal food production and availability, and (3) redd scour (Cluer, 2019). Stage 3 rivers with a high conveyance capacity undergo a decrease in velocity refuge when discharge increases, limiting food production and requiring high energy expenditure for foraging salmonids (Facey and Grossman, 1990; Sommer et al., 2001a; Kemp et al., 2006; Jeffres et al., 2008; Katz et al, 2017). These ecological impacts suppress spawning and rearing primarily for ESA summer steelhead

Current conditions seen within the project reach include channel confinement, lack of channel complexity, lack of LWD and few pools. These conditions impact multiple life stages including: adult holding, spawning and summer/winter rearing. This project will focus on restoration of ecological processes through installation of structures that promote self-sustaining, natural stream processes, improve

and maintain spawning and rearing habitat for all life stages of steelhead.

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#2: Describe the limiting factors, and/or ecological concerns, and limiting life stages (by fish species) that your project expects to address.

Five Year Implementation Plan Reporting document for the Tucannon River Programmatic lists the limiting factors for the Cummings Creek delta project as floodplain connectivity, channel complexity, excessive stream power and pools. The limiting life stages are adult holding, spawning and summer/winter rearing for summer steelhead.

This project will address channel incision from reduced in-channel structure, past

removal of wood from the channel, loss of in-channel structure increasing transport and

bed incision. These impact fish species through limiting habitat factors: low diversity of

in-channel habitats, lack of deep pools for holding or rearing, limited quantity of offchannel habitats and reduced groundwater recharge.

Restoring ecological processes through the implementation of PALS and BDAs in Cummings Creek, we expect improvements to degraded habitat conditions for all life stages of steelhead. For steelhead egg-fry and fry-smolt we expect to increase complexity at low-winter flows and during spring winter peaks and reconnect abandoned floodplains. This will lead to increased flow complexity, increased available floodplain connection and increased pool area. Providing improved habitat conditions for summer and fall juvenile rearing and winter refugia, improved extreme event refugia, riparian growth, wood material availability and bed load material availability for juvenile rearing. For adult steelhead, improving quantity and quality of pools will lead to improved holding and cover. Beaver dams can also help mitigate the effects of climate change by reducing peak flows, and increasing base flows within the project reach (Bouwes et al .2016, Weber et al. 2017).

#3: What are the project goals? The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized. Example Goals and Objectives

The goal of this project is to promote self-sustaining, natural stream processes that improve and maintain spawning and rearing habitat for Snake River steelhead through improvements to previously installed structures and installation of new complexes and structures which include beaver dam analogs (BDA), post assisted log structures (PALS) and other larger structures as needed. All life stages of summer steelhead will benefit from this project.

#### Structure Goals:

Diversify hydraulics, structurally force geomorphic processes, force overbank flow

#### **Complex Goals:**

Increase lateral and vertical connectivity, incision recovery, habitat complexity, beaver dam activity

#### **Overall Project Goals & Objectives:**

Increase system resilience e.g. species abundance, diversity, riparian expansion, increased temporary water storage, flood attenuation

#### **Specific Life Stages Goals:**

Increase instream habitat complexity through large woody debris placement to create improved habitat conditions for juvenile steelhead rearing and refugia

Improve channel processes and increase complexity through PALS and BDA structure installation to improve quantity and quality of pools for improved adult steelhead holding and cover

Reconnect abandoned floodplain through strategic placement of multiple structures to create a complex that improves key habitat and riparian function for all life stages of steelhead

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#4: What are the project objectives? Objectives support and refine biological goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). Example Goals and Objectives

Construct up to 140 structures to include BDAs and PALS, in addition to look for

opportunities to direct fell or grip-hoist larger trees into the channel as needed to improve self-sustaining in-stream habitat complexity over 2.0 mile of stream within the first 2 years of the project, depending on flows.

Reconnect the estimated 10 acres of available existing floodplain and improve riparian conditions by

impounding streamflow through initial BDA/PALS construction and ongoing natural stream processes within 2 years of project completion.

Establish favorable in-stream conditions and initiate riparian habitat reestablishment through large wood placement to create more sustainable habitat for steelhead within 2 years of project completion

Increase and extend summer base flows through seasonal floodplain inundation and temporary water storage resulting in groundwater recharge, moderating stream temperatures for rearing steelhead within 2 years.

Create greater than 25 self-sustaining pools, providing immediate habitat for adult and juvenile steelhead within 2 years.

#5: Scope of work and deliverables. Provide a detailed description of each project task/element. With each task/element, identify who will be responsible for each, what the deliverables will be, and the schedule for completion.

Project and Grant Administration - Nez Perce Tribe

(September 2023-December 2025)

Site Prep - Nez Perce Tribe, Contractor Hired (September 2024-July2024)

Task 1.1 Gather and stage materials

Final design and site layout

**Implementation** - Nez Perce Tribe, Contractor Hired (August 2024- September 2024)

Task 2.1 Construct PALS (120)

Task 2.2 Construct BDAs (20)

Task 2.3 Adaptive Management from RM 0 to RM 2

Task 2.4 Site cleanup and implementation monitoring

Implementation Report - Nez Perce Tribe, Contractor Hired (October- December 2026)

Summarize Data

Reporting

Tasks will be a collaborative effort between the Nez Perce Tribe, WDFW and the agency selected to complete low-tech designs and installation of structures.

#6: What are the assumptions and physical constraints that could impact whether you achieve your objectives?

Assumptions and constrains are external conditions that are not under the direct control of the project, but directly impact the outcome of the project. These may include ecological and geomorphic factors, land use constraints, public acceptance of the project, delays, or other factors. How will you address these issues if they arise?

Landowner acceptance and willingness to authorize channel work is the greatest challenge. Early communication with the landowner has been implemented to help reduce the risk, in addition to answering any questions that may arise. The landowner acknowledge form has been submitted to the landowner and questions have already been received and answered, maintaining a good working relationship will be of high priority to minimize the risk. Physical constraints will be getting materials and equipment needed to locations for structure installation as dense vegetation and high banks could pose a challenge at times. These issues will be addressed through site prep, development and planning.

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#7: How have lessons learned from completed projects or monitoring studies informed this project?

Lessons learned from other agencies building these type of structures in nearby streams, mainly learning from the Intensively Monitored Watershed (IMW) in Asotin Creek, Washington. Lessons learned include: Implement project in phases in order to apply adaptive management strategies and repair/add onto existing structures. Building in high densities allows structures to work with each other and helps to accumulate any lost structures on existing ones. Structure complexes should be built with a variety of structure types that may have different design purposes (split flows, connect side channels, recruit sediment, collect sediment). Ensure the stream has an appropriately low gradient to be a good fit for BDA, PALS. We will also implement adaptive management strategies for Phase 2,3 once Phase I has been implemented summer of 2023.

#8: Describe the alternatives considered and why the preferred was chosen.

Provided the physical characteristics, existing condition, and fish use within Cummings Creek, we chose a method of low tech process based restoration to establish processes that create and maintain healthy riverscapes. This method of restoration has a low-cost, simple and lets the system do the work. The overarching goal of low-tech restoration is to improve the health of as many miles of riverscapes as possible and to promote and maintain the full range of self-sustaining riverscape processes. This type of restoration is suitable for this reach as it is low gradient and has year round flow allowing the force of water to create changes and work towards restoring natural processes throughout the year.

#9: How were stakeholders consulted in the development of this project? Identify the stakeholders, their concerns or feedback, and how those concerns were addressed.

The Letter of Intent was sent through the new Restoration Pathway in the beginning of December to properly inform all individuals that the project is being proposed on WDFW lands. All questions have been answered and additional information has been provided through phone and email conversations in addition to the landowner acknowledgment has been signed.

#10: Does your project address or accommodate the anticipated effects of climate change? Yes

#10a: How will your project be climate resilient given future conditions?

The processes the structures and complexes promote will help this project to be resilient to climate change and future conditions. The structures mimic wood accumulation and/or beaver dam activity initially, later promote the same processes (in high flows), and eventually those processes can continue to reshape and maintain habitat in perpetuity. Letting the system do this work with its stream power, harnesses energy beyond the energy to build low-tech structures. Moreover, if beaver like what they see, they continue the process. Natural beaver dams and BDAs have been documented to reduce hydrology peaks (Bouwes et al. 2016A, Law et al 2016), increase floodplain water storage (Davee, et al. 2019, Munirand and Westbrook 2020, Pollock et al, 2016), protect riparian areas from wildfire (Fairfax and Whittle 2020). Designing with low-tech restoration structures rely on the force of water to create changes rather than creating specific geomorphic forms.

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#10b: How will your project increase habitat and species adaptability?

Increased floodplain connectivity is associated with increases in habitat diversity in fluvial environments which has been shown to increase life history diversity within salmonid populations (Waples et al. 2009). Salmonid populations with greater life history diversity are more resilient to variability and/or change in their environment (Greene et al., 2010; Schindler et al., 2010). Researchers have attributed wood volume and/or frequency as influential in processes operating at the channel reach, valley bottom, and landscape scales. Many studies indicate that most pools in moderate-gradient, cobbleand gravel-bed forest streams are either formed, or strongly influenced, by wood (Robison and Beschta 1990; Abbe and Montgomery 1996). The proposed LTPBR will maximize floodplain connectivity and spatial/structural heterogeneity (channel complexity) within existing land management constraints, thereby increasing the capacity for productivity and resilience.

#11: Describe the sponsor's experience managing this type of project. Describe other projects where the sponsor has successfully used a similar approach.

The Nez Perce Tribe has managed many stream restoration projects since 1997. Over the last 3 years project areas within 3 different watershed have successfully used a phased approach to install over 40 structures in various locations. Monitoring through visual and aerial observation and photo point monitoring has shown project objectives are being met and adaptive management has been continued in project areas to to improve process and function of the structures and complexes.

#12: Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.
No

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## **Restoration Supplemental**

#1: What level of design (per Appendix D) have you completed? Please attach.
None

#1a: What level of design will be produced prior to construction? Preliminary / Field Fit

> #1aa: If you are proposing to follow the field fit guidance in Appendix D then describe your proposed design process and deliverables to be completed prior to construction. Refer to the project deliverables table from Appendix D in your description.

> > The project type is less complicated, with well-established methods and specifications, and a record of successful performance that suggests it can be effectively 'fit in the field. A contractor with extensive experience installing these structures will be used and proper surveys will be conducted to ensure structures are built in suitable locations.

#2: Will (or did) a licensed professional engineer design the project?
No

#2a: Describe the qualifications of the design team.

The design team will be experienced in all aspects of designing low-tech process based restoration projects and building BDAs

and PALS. Design experience comes from multiple projects in the region, including Intensively Monitored Watersheds (IMW).

- #3: Does the project include measures to stabilize an eroding stream bank?
  No
- #4: Is the primary activity of the project invasive species removal? No
- #5: Is the primary activity of the project riparian planting? No
- #6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

All wood posts used will be untreated, other materials needed will be locally sourced.

All equipment used for the project will be cleaned prior to being used at the site. Due to the use of only small equipment and hand tools necessary for project implementation, no significant ground disturbance is anticipated.

#7: Describe the long-term stewardship and maintenance obligations for the project.

There are no expected maintenance responsibilities for the landowner. The structures are designed to be dynamic and work as a group, stimulating natural stream processes over time, therefore no maintenance should be required.

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# **Restoration Metrics**

| Worksite: Cummings Creek Low Tech Restoration (Phase 2, 3) (#1)   |  |
|---|--|
| Miles of Stream and/or Shoreline Treated or Protected (C.0.b)     | 2.00   |
| Project Identified In a Plan or Watershed Assessment (C.0.c)      | Northwest Marine Fisheries Service. 2017.<br>ESA Recovery Plan for Snake River<br>Spring/Summer Chinook Salmon<br>(Oncorhynchus tshawytscha) & Snake River<br>Basin Steelhead (Oncorhynchus mykiss).<br>Portland, OR.  |
| Priority in Recovery Plan   | Cummings Creek is located within the Tucannon River watershed, a major spawning area (MaSA) for ESA-listed Snake River steelhead (Oncorhynchus mykiss) and is listed as a priority restoration reach in the Snake River Salmon Recovery 3-5 Year Provisional |
| Type Of Monitoring (C.0.d.1)                                      | Implementation Monitoring  |
| Monitoring Location (C.0.d.2)                                     | Onsite   |
| INSTREAM HABITAT PROJECT  |  |
| Total Miles Of Instream Habitat Treated (C.4.b)                   | 2.00   |
| Channel structure placement (C.4.d.1)                             |  |
| Total cost for Channel structure placement                        | \$218,711  |
| Material Used For Channel Structure (C.4.d.2)                     | Other Engineered Structures  |
| Miles of Stream Treated for channel structure placement (C.4.d.3) | 2.00   |
| Pools Created through channel structure placement (C.4.d.5)       | 25   |
| Number of structures placed in channel (C.4.d.7)                  | 140  |
| CULTURAL RESOURCES  |  |
| Cultural resources  |  |
| Total cost for Cultural resources                                 | \$7,259  |
| Acres surveyed for cultural resources                             | 25.21  |
| PERMITS   |  |
| Obtain permits  |  |
| Total cost to Obtain permits                                      | \$6,200  |
| Number of permits required for implementation of project          |  |
| ARCHITECTURAL & ENGINEERING                                       |  |
| Architectural & Engineering (A&E)                                 |  |
| Total cost for Architectural & Engineering (A&E)                  | \$64,930   |

# **Overall Project Metrics**

## COMPLETION DATE

Projected date of completion 09/01/2026

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#### **Restoration Cost Estimates**

#### Worksite #1: Cummings Creek Low Tech Restoration (Phase 2, 3)

| Category Cultural Resources Instream Habitat Project | Work Type Cultural resources Channel structure placement    | Estimated Cost<br>\$7,259<br>\$218.711 | Note |
|--|---|--|------|
| Permits  | (C.4.d.1)<br>Obtain permits                                 | \$6,200                                |      |
| Admin, Architecture, and Engineering                 | Subtotal:   | \$232,170<br>\$64,930                  |      |
| gg   | Total Estimate For Worksite:                                | \$297,100                              |      |
| Summary  |   |  |      |
|  | Total Estimated Costs Without AA&E:                         | \$232,170                              |      |
|  | Total Estimated AA&E:<br>Total Estimated Restoration Costs: | \$64,930<br>\$297,100                  |      |

# **Cost Summary**

|                                      | Estimated Cost | Project % | Admin/AA&E % |
|--------------------------------------|----------------|-----------|--------------|
| Restoration Costs                    |                |           |              |
| Restoration                          | \$232,170      |           |              |
| Admin, Architecture, and Engineering | \$64,930       |           | 27.97 %      |
| SUBTOTAL                             | \$297,100      | 100.00 %  |              |
| Total Cost Estimate                  | \$297,100      | 100.00 %  |              |

# **Funding Request and Match**

#### **FUNDING PROGRAM**

Salmon State Projects \$250,000 84.146752

#### **SPONSOR MATCH**

| Other Monetary Funding       | Grant - Federal   |              |  |
|------------------------------|-------------------|--------------|--|
| Amount                       |                   |              | \$17,100.00                            |
| Funding Organization         |                   |              | Bonneville Power Administration (BPA)  |
| Grant Program                |                   |              | Protect and Restore NEOR/SEWA          |
| Other In-Kind Contributions  | Donated Materials |              |  |
| Other III-Mild Contributions | Donated Materials |              |  |
| Amount                       |                   |              | \$30,000.00                            |
| Funding Organization         |                   |              | Department of Fish and Wildlife (WDFW) |
|                              |                   | Match Total: | \$47,10015.853248 '                    |

Total Funding Request (Funding + Match): \$297,100100.000000

# **Questions**

#1: Explain how you determined the cost estimates

Determined from other similar BDA/Pals projects in the Tucannon Watershed and estimates from a firm that designs and implements LTPBR projects.

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#### **Cultural Resources**

#### **Cultural Resource Areas**

Worksite #1: Cummings Creek Low Tech Restoration (Phase 2, 3)

#### Area: Project Work Area

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Restoration activities including placing beaver dam analogues (BDA) and post assisted log structures (PALS) wood structures in the stream and driving posts into the stream bed to support structures. We will look for opportunities to direct fell and grip hoist larger trees into the channel, local material will be used for this to minimize ground disturbance.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

For each BDA built, a small amount of streambed or floodplain will be moved to build BDAs on upstream end.

PALS will have posts penetrating the streambed at each structure. Approximately 140 total structures will be installed over a 2 mile stretch. Direct fell and grip hoist large woody materials already on site for use as larger structures. This material will not be driven into the ground. BDAs and PALS are installed using a post-pounder to install wooden stakes directly into the streambed to act as anchors for the material. Posts are typically driven 3 to 4 feet deep.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

| NA |  |
|----|--|
|----|--|

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

Historic practices such as agriculture, grazing, logging have decreased riparian condition, and caused major changes in channel form and function within the project area. This landscape level impacts have hindered the natural process and function of Cummings Creek.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Agency/Firm hired to complete design and implementation will apply for and complete all necessary permits.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Yes

#6a: Please list the federal agency and funding sources.

Bonneville Power Administration

#6b: Does the federal funding you are utilizing as match require you to receive state funding?

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

No

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

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#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.
No

# **Project Permits**

Permits and Reviews Issuing Organization Applied Date Expiration Date Permit #

Hydraulics Project Approval [HPA] Dept of Fish & Wildlife

Water Quality Certification [Section 401] County/Dept of Ecy.

## **Permit Questions**

#1: Are you planning on using the federal permit streamlining process? Limit 8 Yes

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## **Attachments**

| Required Attachments                | 6 out of 6 done |
|-------------------------------------|-----------------|
| Applicant Resolution/Authorizations | ✓               |
| Cost Estimate                       | ✓               |
| Landowner acknowledgement form      | ✓               |
| Map: Restoration Worksite           | ✓               |
| Photo                               | ✓               |
| RCO Fiscal Data Collection Sheet    | ✓               |

#### PHOTOS (JPG, GIF)

Photos (JPG, GIF)









# 553226

# 553234

# 553238

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

| File      | Attach     | Attack was 4 To a                   | <b>-</b>   |            | File Name, Number   | 011    |
|-----------|------------|-------------------------------------|--|------------|---|--------|
| Type      | Date       | Attachment Type                     | Title  | Person     | Associations  | Shared |
| کے        | 03/08/2023 | RCO Fiscal Data Collection Sheet    | FiscalDataCollectionSheet.pdf                                    | ElizabethE | FiscalDataCollectionSheet.pdf, 554048   |        |
| Χ         | 03/08/2023 | Cost Estimate                       | Cummings Budget_Final.xlsx                                       | ElizabethE | Cummings Budget_Final.xlsx, 554043  | ✓      |
|           | 02/28/2023 | Photo                               | Cummings Photo   | ElizabethE | shpimg_10522.jpg, 553241  | ✓      |
|           | 02/28/2023 | Photo                               | Cummings Creek Photo   | ElizabethE | shpimg_10528.jpg, 553238  | √      |
|           | 02/28/2023 | Photo                               | Image 1.jpg  | ElizabethE | Image 1.jpg, 553234   | ✓      |
|           | 02/28/2023 | Photo                               | Aerial Photo   | ElizabethE | DJI_0007.jpg, 553226  | ✓      |
| کے        | 02/28/2023 | Design document                     | Example BDA & PALS Specs   | ElizabethE | BDAs and PALS_specs_USDA.pdf, 553225  | ✓      |
| 人         | 02/28/2023 | Visuals                             | Structure_Locations.pdf  | ElizabethE | Phases.pdf, 553222  | ✓      |
| <u>}</u>  | 02/23/2023 | Applicant Resolution/Authorizations | Placeholder_ApplicantAuthorizationResolu                         | ElizabethE | Placeholder_ApplicantAuthorizationRe 552593                                       | ✓      |
| <u>k</u>  | 02/23/2023 | Landowner acknowledgement form      | SAL-LandownerAckForm_Phase2_3.pdf                                | ElizabethE | SAL-<br>LandownerAckForm_Phase2_3.pdf,<br>552592                                  |        |
| <u>J.</u> | 02/06/2023 | Map: Restoration Worksite           | RestorationWorksite.pdf  | ElizabethE | RestorationWorksite.pdf, 550851   | √      |
| کے        | 02/06/2023 | Map: Area of Potential Effect (APE) | APE.pdf  | ElizabethE | APE.pdf, 550848   | ✓      |
| <u>k</u>  | 01/12/2023 | Project Review Comments             | Project Review Comments Report, 23-<br>1032R (01/12/23 08:35:22) | BartL      | Project Review Comments Report - 23-<br>1032 (01-12-2023_08-35-22).pdf,<br>547782 | ✓      |
| <u>}</u>  | 01/12/2023 | Project Application Report          | Project Application Report, 23-1032R (01/12/23 08:35:21)         | BartL      | Project Application Report - 23-1032 (01-12-2023_08-35-21).pdf, 547781            | ✓      |
| کے        | 01/12/2023 | Project Review Comments             | Project Review Comments Report, 23-<br>1032C (01/12/23 08:33:48) | BartL      | Project Review Comments Report - 23-<br>1032 (01-12-2023_08-33-48).pdf,<br>547777 | ✓      |
| A. Ros    | 01/12/2023 | Project Application Report          | Project Application Report, 23-1032C (01/12/23 08:33:48)         | BartL      | Project Application Report - 23-1032 (01-12-2023_08-33-48).pdf, 547776            | ✓      |

# **Application Status**

Application Due Date: 06/27/2023

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Status Name Status Date Submitted By Submission Notes

Application Submitted 04/12/2023 Elizabeth Eastman

Preapplication 01/09/2023

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them. (Elizabeth Eastman, 04/12/2023)

Date of last change: 04/12/2023

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